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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,081	11/03/2008	Tomohisa Tenra	MAT-8798US / P37912-02	2252

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EXAMINER	
THOMAS, ALEXANDER S	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
04/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,081	TENRA, TOMOHISA	
	Examiner	Art Unit	
	Alexander Thomas	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-9,11 and 12* is/are pending in the application.

4a) Of the above claim(s) *11 and 12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/16/09 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fay 5,609,934. The reference discloses a vacuum heat insulator comprising a core of a laminated body of glass fibers that are laminated in a thickness direction and a gas barrier enveloping member covering the core, wherein the core is heated to a temperature about equal to the strain point of the fibers and simultaneously compressed; see column 2, lines 8-43. Regarding the claimed temperature at which the fibers are processed, this is a process limitation that does not add any specific structural feature to the final product. In any event, the temperature at which the fibers are heated in the reference may be less than the strain point of the fibers; see column 2, lines 14-

20. Therefore, in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, as is the case here, a prima facie case of obviousness exists and it would have been obvious to one of ordinary skill in the art through routine experimentation to determine an optimum range of temperature treatment of the glass fibers to produce a product with desired properties for a specific end use. Concerning the claimed heat conductivity, the reference's product actually exhibits a better, i.e. lower, conductivity than the instantly claimed product; see the table in column 6. In any event, it would have been obvious to one of ordinary skill in the art through routine experimentation to determine an optimum range of temperature and pressure to produce a product with a heat conductivity in the instantly claimed range depending on the requirements for a particular end use in the absence of unexpected results attributable to the claimed processing temperature. Regarding the entanglement of the fibers, there will inherently be some entanglement of the fibers in view of the pressure applied during forming of the core. Concerning claims 5 and 6, the reference's product also has a density within the instantly claimed ranges; see column 5, lines 54-55 and the table in column 6. Concerning claim 7, Figure 2 of the reference shows a smooth surface on one side of the core.

4. Claims 1-3, 5-7 and 9 are rejected under 35 U.S.C. 103(a) as obvious over Jung et al 2002/0167105. The reference discloses a vacuum heat insulator comprising a core of glass wool that contains no binder and is encased in an envelope; see [0010]. The core is pressurized at a temperature that can be lower than the strain temperature of the glass [0020] and may have a final density within the claimed range [0009]. This

disclosure is considered to meet the instantly claimed temperature requirements since the temperature in the reference is high enough to allow some deformation of the fibers [0015] but not high enough to excessively break the fibers [0020]. Furthermore, the temperature is a process limitation and it is the final products that must be compared. The final product in the reference meets the instant claims since it is comprised of a core of glass wool that was pressurized at a high temperature to form a product with a density within the claimed ranges. In any event, the temperature at which the fibers are heated in the reference may be less than the strain point of the fibers; see [0018] and [0023]. Therefore, in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, as is the case here, a prima facie case of obviousness exists and it would have been obvious to one of ordinary skill in the art through routine experimentation to determine an optimum range of temperature treatment of the glass fibers. Regarding the entanglement of the fibers, there will inherently be some entanglement of the fibers in view of the pressure applied during forming of the core. Concerning claims 5 and 6, the reference's core is considered to inherently possess these properties in view of its disclosed density, lack of binder, being made from the same material, and the similar pressure used to form the core. In any event, it would have been obvious to one of ordinary skill in the art to adjust pressure, temperature, etc. in the process of the reference to provide optimum physical properties in the product for a particular end use. Concerning claim 7, Figure 1D of the reference shows a smooth surface on one side of the core.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Fay 5,609,934 or Jung et al as applied to claims 1-3 and 5-7 above, and further in view of Rapp et al 6,034,014. Fay discloses that the amount of alkali components in glass fiber used for insulation is a result effective variable for providing durability and acceptable processing; see column 3, line 62 through column 4, line 2. Therefore, it would have been obvious to one of ordinary skill in the art to use routine experimentation to determine an optimum range of alkali in the glass fiber of the primary reference's product in view of the teachings in the secondary reference.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fay 5,609,934 as applied to claims 1-3 and 5-7 above, and further in view of Jung et al 2002/0167105. Jung et al disclose the well-known use of vacuum insulation panels in refrigerators; see [0002]-[0004]. It would have been obvious to one of ordinary skill in the art to use the vacuum insulating product of the primary reference in a refrigerator in view of the disclosure in the secondary reference to insulate the refrigerator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Thomas whose telephone number is 571-272-1502. The examiner can normally be reached on 6:30-4:00 M-THUR.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander Thomas/
Primary Examiner
Art Unit 1794